Complete Summary

GUIDELINE TITLE

Low back.

BIBLIOGRAPHIC SOURCE(S)

Work Loss Data Institute. Low back. Corpus Christi (TX): Work Loss Data Institute; 2003. 50 p. [173 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Work-related low back pain

GUIDELINE CATEGORY

Diagnosis
Treatment

CLINICAL SPECIALTY

Chiropractic
Family Practice
Internal Medicine
Surgery

INTENDED USERS

Advanced Practice Nurses
Health Care Providers
Health Plans

Nurses
Physicians

GUIDELINE OBJECTIVE(S)

To offer evidence-based step-by-step decision protocols for the assessment and treatment of workers' compensation conditions

TARGET POPULATION

Workers with low back pain

INTERVENTIONS AND PRACTICES CONSIDERED

1. Aerobic exercise
2. Anti-inflammatory medications (e.g., ibuprofen)
3. Back schools
4. Bed rest (avoidance of)
5. Behavioral treatment
6. Chiropractic
7. Cold/heat packs
8. Computed tomography (CT) myelography
9. Differential diagnosis
10. Discectomy
11. Epidural injections of steroids
12. Exercise therapy
13. Fusion
14. Heat therapy
15. Manipulation
16. Massage
17. McKenzie method
18. Magnetic resonance (MR) neurography
19. Magnetic resonance imaging (MRI)
20. Muscle relaxants
21. Myelography
22. Nonprescription medications (e.g., acetaminophen, aspirin, ibuprofen)
23. Oral corticosteroids (e.g., Medrol Dose Pack)
24. Physical therapy
25. Psychological screening
26. Return to work and regular activities
27. Radiography

The following interventions were considered, but either are not currently recommended or not specifically included as major recommendations:

1. Acupuncture
2. Artificial disk (disk prosthesis)
3. Biofeedback
4. Botulinum toxin A (Botox)
5. Chemonucleolysis
6. Cutaneous laser treatment
7. Diathermy

8. Discography
9. Electromagnetic pulsed therapy
10. Electromyography (EMG)
11. Facet-joint injections
12. IDET (intradiscal electrothermal anuloplasty)
13. Implantable pumps for narcotics
14. Implantable spinal cord stimulator
15. Lumbar supports
16. Magnet therapy
17. Manipulation under anesthesia (MUA)
18. Neuroreflexotherapy
19. Nucleoplasty
20. Opioids (narcotics)
21. Percutaneous discectomy
22. Percutaneous electrical nerve stimulation (PENS) units
23. Percutaneous endoscopic laser discectomy (PELD)
24. Prolotherapy, also known as sclerotherapy
25. Radiofrequency neurotomy
26. Single photon emission computerized tomography (SPECT)
27. Sympathetic therapy
28. Traction
29. Transcutaneous electrical neurostimulation (TENS) units
30. Ultrasound
31. Vertebral axial decompression (VAX-D)

MAJOR OUTCOMES CONSIDERED

- Reliability and value of diagnostic assessments
- Effectiveness of treatment in relieving pain and restoring normal function

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Ranking by quality within type of evidence:

a. High Quality
b. Medium Quality
c. Low Quality

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

The guideline developers reviewed published cost analyses.

METHOD OF GUIDELINE VALIDATION

Not stated

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Identify Radicular Signs

- First visit: may be with Primary Care Physician MD/DO (50%), Orthopedist (33%), or Chiropractor (17%)
- Determine radiculopathy:
    - Sensation: Feeling pain radiating below the knee (calf or lower), not just referred pain (pain radiating to buttocks or thighs), and dermatological sensory loss
    - Straight leg raising test (sitting and supine)
    - Motor strength, deep tendon reflexes

- Document flexibility (fingertip test), muscle atrophy (calf measurement), local areas of tenderness, visual pain analog
- History

- Rule out "red flag" diagnoses, including diagnostic studies (See other treatment parameters for each of these):
  - Cauda Equina Syndrome (Schedule emergency procedure)
  - Fracture, Dislocation, Wound (Refer to the original guideline document for ICD-9 codes for this and other diagnoses)
  - Cancer, Infection
  - Dissecting/Ruptured Aortic Aneurysm

Without Radiculopathy (90% of cases)

- Also first visit (day 1):
  - Prescribe decreased activity, if necessary, based on severity and difficulty of job, passive therapy with heat/ice (3 to 4 times/day), stretching, appropriate analgesia (i.e., acetaminophen) and/or anti-inflammatory (i.e., ibuprofen) [Benchmark cost: $14], back to work except for severe cases in 72 hours, possibly modified duty. Avoid bed rest.
  - No x-rays unless major trauma (e.g., a fall)
  - If muscle spasms, then prescribe muscle relaxant with limited sedative side effects [Benchmark cost: $44]
  - Reassure patient: common problem (90% of patients recover spontaneously in 4 weeks)

Official Disability Guidelines (ODG) Return-To-Work Pathways (lumbar sprain and lumbago)

Modified Duty --

Mild, clerical/modified work: 0 days

Severe, clerical/modified work: 3 days

- Second visit (day 7 – about 1 week after first visit)
  - Document progress (flexibility, areas of tenderness, motor strength, straight leg raise--sitting and supine).
  - If still 50% disabled, then prescribe manual therapy [Benchmark cost: $250]: Refer to massage therapist, chiropractor, physical therapist, or occupational therapist (3 visits in first week), or by treating DO
  - Probably discontinue muscle relaxant

ODG Return-To-Work Pathways (lumbar sprain and lumbago)

Manual Work --

Mild, manual work: 10 days

Severe, manual work: 14--17 days

- Third visit (day 14 – about 1 week after second visit)
    - Document progress.
    - Prescribe muscle-conditioning exercises.
    - At this point 66% to 75% should be back to regular work.
    - If still disabled, then first imaging study (anteroposterior [AP]/lateral 2-view x-ray of lumbar) [Benchmark cost: $150] to rule out spondylosis or joint narrowing/spinal stenosis (age related, not caused by recent trauma--will not change treatment)
    - Continue therapist, change from passive to active modality, 2 visits in next week, teach home exercises
    - End manual therapy at 4 weeks.

ODG Return-To-Work Pathways (lumbar sprain and lumbago)

Manual & Heavy Manual Work --

Severe, manual work: 14--17 days

Severe, heavy manual work: 35 days

With Radiculopathy (10% of cases)

- Also first visit (day 1)
    - Same as non-radicular, but
    - Prescribe a Medrol Dose Pack (5-day steroids, generic) [Benchmark cost: $120]

ODG Return-To-Work Pathways (intervertebral disc disorders)

Disc bulge --

Mild cases with back pain, avoid strenuous activity: 0 days

Herniated disc --

Initial conservative medical treatment, clerical/modified work: 3 days

- Second visit (day 7 – about 1 week after first visit)
    - Same as non-radicular, but
    - Reassure, but warn of increased numbness or weakness of either leg: if so, get back to provider in one day
    - Consider an epidural steroid injection (ESI) for severe cases hoping to avoid surgery [Benchmark cost: $376]
    - Consider referral to musculoskeletal physician (Orthopedist/Physical Medicine/Sports Medicine).
- Third visit (day 14 – about 72 hours after ESI)
    - Same as non-radicular, but
    - About 50% can be back at modified duty.
    - If improvement, then add strengthening exercises, increased activity

        - If no improvement, prescribe second ESI (7-10 days after first) [Benchmark cost: $315]
- Fourth visit (day 21 to 28 – about 72 hours after second ESI)
    - Document, if no improvement then:
    - First magnetic resonance imaging (MRI) (about 3% of total cases, or 30% of radicular cases) to confirm extruded disk with nerve root displacement [Benchmark cost: $1,600]
    - MRI or computed tomography (CT) not indicated without obvious clinical level of nerve root dysfunction or before 3 to 4 weeks
    - Bone scan if spondylolisthesis
    - If MRI negative and surgery still justified by severity of symptoms, then combined myelogram and post-myelogram CT [Benchmark cost: $750]
    - Second MRI only if progression of neurological symptoms (less than 1% of cases)
    - Refer to fellowship trained Spine Surgeon: Neurosurgeon (50%), Orthopedist (50%)
    - Before surgery, screen for psychological symptoms that could affect surgical outcome (e.g., substance abuse, child abuse, work conflicts, somatization, verbalizations, attorney involvement, smoking)
    - Possibly refer to psychologist for testing (Minnesota Multiphasic Personality Inventory [MMPI] or, better, Waddell test) [Benchmark cost: $540]

ODG Return-To-Work Pathways (intervertebral disc disorders)

Initial conservative medical treatment, manual work: 28 days

Initial conservative medical treatment, regular work if cause of disability: 84 days

- Surgery (day 28-35) (about 2% of total cases, or 20% of radicular cases)
    - Review options/outcomes with patient, let patient decide
    - Simple discectomy/laminectomy, minimally invasive [Benchmark cost: $17,400]
    - Outpatient (23-hour stay)
    - Post-operative pain, walking exercises

ODG Return-To-Work Pathways (intervertebral disc disorders)

Discectomy, clerical/modified work: 28 days

Discectomy, manual work: 56 days

Discectomy, heavy manual work: indefinite

Laminectomy, clerical/modified work: 28 days

Laminectomy, manual work: 70 days

Laminectomy, heavy manual work: indefinite

Lumbar fusion, clerical/modified work: 56 days

Lumbar fusion, manual work: 140 days

Lumbar fusion, heavy manual work: indefinite

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

During the comprehensive medical literature review, preference was given to high quality systematic reviews, meta-analyses, and clinical trials over the past ten years, plus existing nationally recognized treatment guidelines from the leading specialty societies.

The type of evidence associated with each recommended or considered intervention or procedure is ranked in the guideline's annotated reference summaries.

Ranking by Type of Evidence:

1. Systematic Review/Meta-Analysis
2. Controlled Trial–Randomized (RCT) or Controlled
3. Cohort Study--Prospective or Retrospective
4. Case Control Series
5. Unstructured Review
6. Nationally Recognized Treatment Guideline (from www.guideline.gov)
7. State Treatment Guideline
8. Foreign Treatment Guideline
9. Textbook
10. Conference Proceedings/Presentation Slides

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

These guidelines unite evidence-based protocols for medical treatment with normative expectations for disability duration. They also bridge the interests of the many professional groups involved in diagnosing and treating work-related low back pain.

POTENTIAL HARMS

- Anti-inflammatory treatment of injuries may delay recovery.
- Adverse reactions of oral corticosteroids may outweigh long-term benefits.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2003

GUIDELINE DEVELOPER(S)

Work Loss Data Institute - Public For Profit Organization

SOURCE(S) OF FUNDING

Not stated

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available to subscribers from the Work Loss Data Institute Web site.

Print copies: Available from the Work Loss Data Institute, 169 Saxony Road, Suite 210, Encinitas, CA 92024; Phone: 800-488-5548, 760-753-9992, Fax: 760-753-9995; www.worklossdata.com.

AVAILABILITY OF COMPANION DOCUMENTS

Background information on the development of the Official Disability Guidelines of the Work Loss Data Institute is available from the Work Loss Data Institute Web site.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on February 2, 2004. The information was verified by the guideline developer on February 13, 2004.

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